



VERIFICATION / CERTIFICATION REPORT

TROJES HYDROPOWER PROJECT IN MEXICO

(UNFCCC Registration Ref No. 0649)

Monitoring period:
01 December 2006-30 September 2007.

REPORT No. 2007-2071

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DET NORSKE VERITAS



VERIFICATION / CERTIFICATION REPORT

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Client: Impulsora Nacional de Electricidad S de RL de CV	Client ref.: Jacobó Mekler

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Summary:

Det Norske Veritas Certification AS has performed the verification of the emission reductions reported for the "Trojes Hydropower Project" in Mexico (UNFCCC Registration Ref. No.0649) for the period 01 December 2006 - 30 September 2007. In our opinion, the GHG emission reductions reported for the "Trojes Hydropower Project" in the monitoring report version 3 of 05 August 2008 are fairly stated.

The GHG emission reductions were calculated correctly on the basis of the approved monitoring methodology AMS-I.D Version 8 and the monitoring plan and formulae given in the Project Design Document of 19 April 2006.

Det Norske Veritas Certification AS is thus able to certify that the emission reductions from the "Trojes Hydropower Project" in Mexico during the period 01 December 2006 - 30 September 2007 amount to 15 653 tonnes of CO₂ equivalent.

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Work carried out by: Gustavo Godinez, Simon Dawes			
Work verified by: Michael Lehmann			
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<i>Table of Content</i>	<i>Page</i>
1 INTRODUCTION	1
1.1 Objective	1
1.2 Scope	1
1.3 Description of the Project Activity	1
2 METHODOLOGY	2
2.1 Review of Documentation	2
2.2 Site Visits	3
2.3 Assessment	3
2.4 Reporting of Findings	4
3 VERIFICATION FINDINGS	4
3.1 Remaining Issues, CARs, FARs from Previous Validation or Verification	4
3.2 Project Implementation	5
3.3 Completeness of Monitoring	6
3.4 Accuracy of Emission Reduction Calculations	6
3.5 Quality of Evidence to Determine Emission Reductions	7
3.6 Management System and Quality Assurance	8
4 PROJECT SCORECARD	9
4.1 Summary of periodic verification findings	12
5 CERTIFICATION STATEMENT	14
6 REFERENCES	16

***Abbreviations***

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CER	Certified Emission Reduction(s)
CH ₄	Methane
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNV	Det Norske Veritas
DNA	Designated National Authority
FAR	Forward Action Request
GHG	Greenhouse gas(es)
INELEC	Impulsora Nacional de Electricidad S de RL de CV
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
NGO	Non-governmental Organisation
ODA	Official Development Assistance
PDD	Project Design Document
UNFCCC	United Nations Framework Convention for Climate Change
GWP	Global Warming Potential



1 INTRODUCTION

1.1 Objective

Impulsora Nacional de Electricidad S de RL de CV (INELEC) has commissioned has commissioned Det Norske Veritas Certification AS (DNV) to carry out the verification and certification of emission reductions reported for the “Trojes Hydropower Project” for the period 01 December 2006 - 30 September 2007.

This report contains the findings from the verification and a certification statement for the certified emission reductions.

1.2 Scope

The scope of the verification is:

- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.

The verification shall ensure that reported emission reductions are complete and accurate in order to be certified.

The validation team has, based on the recommendations in the Validation and Verification Manual /14/, applying a risk-based approach, focusing on the identification of significant reporting risks and verifying the mitigation measures for these.

1.3 Description of the Project Activity

Project Parties:	Mexico, United Kingdom
Title of project activity:	Trojes Hydropower Project
UNFCCC registration No:	0649
Project Entity:	Impulsora Nacional de Electricidad S de RL de CV Ing. Jacobo Mekler Bosques de Ciruelos 190-303 ^a , Bosques de las Lomas, Mexico D. F. C. P.11700, México Phone: (52 55) 56968924 Email: jmekler@asergen.com.mx



Project's crediting period: The project participant has selected a 7 year renewable crediting period starting on 01 April 2003.

Project's actual starting date: 01 April 2003

Location of the project activity: Cortina BajaPresa Trojes, Municipality of Pihuamo in the state of Jalisco, 50 Km South East of the City of Colima, México.

The project activity is a hydroelectric power plant with a nominal capacity of 8 MW. The main purpose of the project activity is to generate electricity utilizing renewable sources and supply it to its Mexican consumer partners (mainly industrial users and municipalities) as per the power purchase agreements signed with these partners. The project developer uses the national grid's (Comision Federal de Electricidad, CFE's) transmission system for the wheeling of electricity to the consumers.

The emission reductions resulting from the project activity are determined by multiplying the electricity supplied to the national grid and grid emission factor of 0.531 t CO₂/MWh, which has been fixed ex-ante and validated for the first crediting period. According to the validated project design document, there are no project emissions and leakage effects associated with the project.

2 METHODOLOGY

The verification of the emission reductions has assessed all factors and issues that constitute the basis for emission reductions from the project. As the CDM Executive Board has not yet formally endorsed the application of any materiality principle for verification of emission reductions from CDM projects - implying that emphasis should be on the significant contributors to emission reductions - the DNV team has for this assignment checked all factors and issues with the same emphasis.

Verification team

Lead auditor: *Gustavo Godinez Martínez, CDM Verifier, DNV Mexico City*

Sector expert: *Simon Dawes, DNV Sydney*

Technical reviewer: *Michael Lehmann, DNV Oslo*

Duration of verification

Preparations: *From 13-10-2007 to 15-10-2007*

On-site verification: *From 16-10-2007 to 17-10-2007*

Reporting: *From 05-11-2007 to 09-05-2008*

2.1 Review of Documentation

Following documents were reviewed as a part of the verification process:

- i) Monitoring report version 1, 2 and 3 dated 5 October 2007, 13 March 2008 and 05 August 2008 respectively /2/.



- ii) Registered Project Design Document (PDD), version 3 dated 19 April 2006, especially the monitoring plan contained in the PDD /1/.
- iii) Validation report (DNV Report Number 2004 – 0050), dated 13 September 2006 /7/.
- iv) The monthly electricity invoices /6/ issued by Hidroelectricidad Del Pacifico. S. de R.L. De C.V. which is Trojes Hydropower Project commercialization entity to their consumer partners during the period 01 December 2006 - 30 September 2007.
- v) Internal monthly generation reports (monitored by back up meter installed at the project site) /4/ for the period 01 December 2006 - 30 September 2007.
- vi) CFE monthly generation reports (Measured from the CFE main meter located at the substation /4/ for the period from 01 December 2006 - 30 September 2007.
- vii) Calibration Certificates dated 31 March 2005, 03 March 2006 and 05 November 2007 for the main and backup meters /3/.

2.2 Site Visits

A visit to the Trojes hydropower plant was made on 16 October 2007 with the purpose of inspecting the operation of the project and verifying the operational routines. On 22 October 2006 a visit to Impulsora Nacional de Electricidad S de RL de CV offices in Mexico City was performed to assess management system procedures and commercial invoices.

2.3 Assessment

On 16 October 2007, DNV inspected the Trojes facilities and confirmed that all systems were operational at the moment of the inspection and that nameplate capacity and actual implementation of the project was as defined in the PDD.

The effectiveness of the generating set and the accuracy of the electricity generated and measured by the CFE were also assessed.

Additionally during the same site visit, the daily, weekly and monthly reports and records of the electricity generation were cross-checked.

The information contained in the monitoring report was assessed by:

- Verifying the implementation and the effectiveness of operation and maintenance of the equipments, including turbines and generator.
- Verifying that all data is collected correctly and personnel is aware of the accuracy of the readings.
- Verifying that the readings of electricity produced and sent to the grid is measured through reliable and calibrated instruments.
- Verifying that monitoring and measuring equipment is calibrated and correctly operated and maintained, and
- Verifying the effectiveness of the data quality assurance and control performed by the owners and operators (MYOCEN). In addition, DNV performed control calculations to verify the results of the monitoring report for the project /2/.



In addition to the visit to the hydropower plant, the project owner's office in Mexico City was audited on 22 October 2007. During this meeting INELEC employees provided relevant information to address DNV's verification findings (CARs and FARs) and other technical information identified during the on-site audit.

2.4 Reporting of Findings

Findings established during the verification may be that:

- i) The verification is not able to obtain sufficient evidence for the reported emission reductions or part of the reported emission reductions. In this case these emission reductions shall not be verified and certified;
- ii) The verification has identified material misstatements in the reported emission reductions. Emission reductions with material misstatements shall be discounted based on the verifier's ex-post determination of the achieved emission reductions.

A Forward Action Requests (FAR) should be issued, where the actual project monitoring and reporting practices requires attention and /or adjustment for the next consecutive verification period, or an adjustment of the monitoring plan is recommended.

In the context of FAR's, risks have been identified, which may endanger the delivery of high quality CERs in the future, i.e. by deviations from standard procedures as defined by the monitoring plan. As a consequence, such aspects should receive a special focus during the next consecutive verification. A FAR may originate from lack of data sustaining claimed emission reductions.

3 VERIFICATION FINDINGS

3.1 Remaining Issues, CARs, FARs from Previous Validation or Verification

There were two open findings for the *first verification* activity:

- 1) FAR 2: No specific monitoring and reporting tasks are given in the regular training, a CDM course may have to be taken by the employees in order to gain awareness of the importance of the monitoring and reporting tasks.

This FAR was partially solved by the project participant, which showed to DNV evidence of the inclusion of the CDM Course into the Training Program for November 2007, a course destined to be taken by the employees involved in monitoring and reporting tasks. The project participant provided DNV with evidence that employees were attending this course.

In conclusion, FAR 2 from the first verification is closed.

- 2) FAR 4: The operating personnel showed a reduced skill to track data changes in design drawing and as built drawings.

This FAR 4 was already solved by the project participant, which developed and delivered the procedures for the record and information control.



In conclusion, FAR 4 from the first verification is closed.

3.2 Project Implementation

During the site visits, DNV was able to confirm that the project has been implemented as planned. DNV inspected the project facilities at the Trojes Dam in Jalisco, Mexico, reviewed the “as built” drawings /8/, records and other documentary evidence of the construction and operation of the hydroelectric plant, such as operation manuals of the main equipment. Based on the on site inspection and also the review of various documents (as mentioned above), DNV was able to confirm that the project activity has been implemented as planned.

DNV was able to verify that the nameplate capacities of turbines are consistent with the capacity given in the PDD/1/. The generating set and auxiliary equipments were also inspected, and the maintenance program shows an adequate compliance in accordance with manufacturer recommendations and best practices.

Furthermore, during the site visit, DNV was also able to confirm that the calibration of the electricity meter (main meter) with serial AR - 0012A368 - 02 (located at 2.5 km from the power house in the sub station and under the control of “CFE” Comisión Federal de Electricidad) as well as for the electricity meter (secondary meter) with serial number PR – 0506A068 – 02 (located at 2.5 km from the power house in the sub station and under the control of “CFE” Comisión Federal de Electricidad), was carried out by CFE on 05 November 2007 /3/. However, at the time of the site visit, these documents were not available. Hence, a corrective action request (CAR 1) was issued during the site visit which was subsequently closed during the audit to the offices of the project participant in Mexico after verifying the calibration records.

For the meters located in the plant the responsible of the calibrations is the project participant. However, these meters are for internal use only, given that the emission reductions are calculated based on the meters by CFE located 2.5 km from the power house which calibration is the responsibility of CFE.

Furthermore, during the verification, the project developer presented the net electricity generation monthly reports (based on the readings from the main meter), invoices raised on the partner consumers (based on the actual electricity consumed by them) and also the generation reports from the internal meters located at the project site for the period 01 December 2006 - 30 September 2007. Review of the documents presented (as mentioned above), the registered PDD, validation report and monitoring report revealed that the monitoring report, version 01 dated 5 October 2007 was not in line with the monitoring plan in the registered PDD. As per this version of monitoring report, the emission reductions were calculated on the basis of the invoices raised to the consumers while as per the approved monitoring plan, the emission reductions should be based on the electricity delivered to the grid and measured from the main meter (SN AR-0012A368-02). Therefore, a corrective action request (CAR 2) was issued. The project developer revised the monitoring report in accordance with the approved monitoring plan. The revised monitoring report is based on the measured monthly electricity generation figures and has been reviewed by DNV and CAR 2 was closed.



3.3 Completeness of Monitoring

The only parameter that needs to be monitored (in accordance with the approved monitoring plan) is the net electricity supplied to the national grid, CFE. DNV was able to verify that the same is being monitored using the calibrated main meter located at 2.5 km from the power house in the sub station. DNV identified some samples for the monitoring period under consideration and found that there was no discrepancy in the reported data. The monthly electricity generation data was assessed against the daily generation reports from the CFE.

Formal procedures that indicate the data flow and responsibilities of the persons with monitoring and reporting tasks were also verified and were found to be reasonable.

There was presented during the site visit the formal procedures that indicate the data flow and responsibilities of the persons with monitoring and reporting tasks. The procedures are consistently managed; however the general control over the procedures is not at the best possible way in order to assure the control over the same..

3.4 Accuracy of Emission Reduction Calculations

Emission reductions resulting from the project activity during the monitoring period under consideration 01 December 2006 - 30 September 2007 have been correctly calculated in accordance with the approved monitoring methodology AMS-I.D, version 08. The electricity delivered to the grid (measured from the main meter of CFE) has been multiplied with the validated grid emission factor of 0.531 t CO₂/ MWh. As per registered PDD, the grid emission factor has been fixed ex-ante for the first crediting period.

The certificates of calibration are issued by CFE (Comisión Federal de Electricidad) and this is the only entity authorized to perform these activities for every supplier of electricity to the Mexican Grid.

The project participant Hidroelectricidad del Pacífico S de RL de CV, i.e. the entity in charge of the commercialization of the electricity generated by the Trojes Hydropower Project, has a contract with CFE in which it is established that only in case of a deviation of more than +/- 2.0 % (greater than the value 2) identified during the calibration of the main meter, CFE will request an adjustment of the total amount of electricity delivered to the grid for a period taken into account the date of the last calibration and the adjustment will impact the invoicing of the electricity sold to the grid. On the other hand, the manufacturer establishes an accuracy of +/- 0.20% and in case of major deviations the meter will have to be sent to the manufacturer's plant.

Certificate of Calibration of the main meter Serial Number (7EY981, 5F4C13) dated 31 March 2005: This certificate stated that this device is in the range established by the manufacturer and authorized by CFE (0.045%), in which case CFE has recognized all the electricity delivered to the grid up to this date.

Certificate of Calibration of the main meter identified as (AR-0012A368-02) 5F3C23 (Main Meter, previously identified as 7EY981, 5F4C13) dated 03 March 2006. This certificate stated that this device is in the range established by the manufacturer and authorized by CFE (0.061%), in which case CFE has recognized all the electricity delivered to the grid up to this date.

Certificate of Calibration of the main meter identified as (AR-0012A368-02) 5F3C23 (Main Meter, previously identified as 7EY981, 5F4C13) dated 5 November 2007: This certificate stated



that this device presents a deviation of -0.2675%. Although this is within the acceptable range established by CFE, it is not by within the acceptable range according to the manufacturer's specification. For this reason the meter was removed and sent to the manufacturer's plant to be calibrated.

The backup meter identified as (PR-0506A068-02), for which the Certificate of Calibration of 5 November 2007 confirmed that the measuring accuracy of this meter is within the range required by the CFE and the manufacturer (-0.0433%). Hence, the readings of the back-up meter are taken as the measurement for the electricity delivered to the grid from 5 November 2007 onwards until the main meter is reinstalled and calibrated as per the specification.

The calibration of the main meter on 5 November 2007 showed that the error of the meter was: -0.2675 % and thus negative, i.e. the meter showed less electricity being delivered to the grid than actually delivered to the grid. Hence, DNV accepted the readings from this meter as the basis for determining emission reductions as this meter has systematically underestimated the amount of electricity supplied to the grid. The meter readings from this meter were also the basis for the invoices raised.

3.5 Quality of Evidence to Determine Emission Reductions

The net amount of electricity delivered to the grid during the monitoring period under consideration is 29 479.37 MWh and the resulting emissions are 15 653.55 tCO₂e, for which the project participant claims 15 653 tCO₂e.

As mentioned above, the basis for the emission reduction calculations is the metered electricity supply to the grid. The monitoring and reporting of electricity produced data is in accordance with well established and effective operational practices. DNV was also able to verify that there are well defined procedures that accurately describe responsibilities for project monitoring, reporting and other activities. The responsibility for data collection and recording is with the superintendent in charge of the facilities. There is a daily report of the readings of the measuring instrument and this is internally verified on a weekly and monthly basis as well as in annual report. These data are ultimately confirmed in the Mexico City offices and audited on a monthly basis and also cross checked with CFE reports.

The project participant showed during the site visit that there are defined procedures that accurately describe responsibilities for project monitoring and reporting and other activities as performed. However, these responsibilities are defined according to the job descriptions, but there is no evidence of the analysis of the results of the evaluations of the competence of the personnel, in order to improve the current training program according to the necessities of the operation of the plant. This initiated FAR 2.

Considering that main evidence to determine emission reductions are the readings from the main meter, the calibration report was requested. The calibration reports /3/ shows:

For the main meter (Serial Number AR-0012A368-02): a deviation of -0.2675%.

For the secondary meter (Serial Number PR-0506A068-02): a deviation of -0.0433%.

According to the manufacturer the deviation range for this device is +/- 0.20%, considering this situation the main meter will be sent to the manufacturer in order to correct the deviation, and the



secondary meter will serve as the main meter (as of 5 November 2007) while the main meter is in the manufacturer's facilities.

However, CFE does not apply any correction of the reported electricity unless the deviations are over +/- 2% (according to the Inter Connection Contract /11/). , As a consequence CFE did not apply any correction to the reported readings from the main meter.

3.6 Management System and Quality Assurance

During the site visit, it was observed that the personnel involved in the operation of the project lacked knowledge regarding the management structure for this CDM project. A refresher course about CDM may be taken in order to ensure that the personnel involved understand the importance of their activities. This initiated FAR 1. Though the project developer provided a basic CDM training to the employees involved in the project operation and management, the affect of the training course will be assessed during the next periodic verification. Hence, FAR 1 remains open.

4 PROJECT SCORECARD

Risk Areas		Conclusions			Summary of findings and comments	Error/Discounted Uncertainty Tonnes
		Baseline Emissions	Project Emissions	Calculated Emission Reductions		
Completeness	<ul style="list-style-type: none"> Source coverage/ boundary definition 	OK	OK	OK	All relevant sources are covered by the monitoring plan and the boundaries of the project are defined correctly and transparently.	NONE
Accuracy	<ul style="list-style-type: none"> Physical Measurement and Analysis 	OK	OK	OK CAR-1	<p>The calibration report was not available at the time of the site visit. The document was delivered to DNV after this. The Document showed that the main meter (Serial Number: AR-0012A368-02) had a deviation of -0.2675%, even when CFE will not take actions to reconsider the readings taken with this meter (considering the Inter – Connection Contract /11/), the project participant had already taken provisions to use the secondary electricity meter (Project Participant's Electricity Meter Serial No. PR – 0506A068 – 02) until the main electricity meter is condition to be used.</p> <p>As per the Inter Connection Contract /11/ between the project participant and CFE no corrections will be applied for the amount of generation due to the deviation not exceeding the permitted range +/- 2%.</p>	NONE

Risk Areas		Conclusions			Summary of findings and comments	Error/Discounted Uncertainty Tonnes
		Baseline Emissions	Project Emissions	Calculated Emission Reductions		
	<ul style="list-style-type: none"> Data calculations 	OK	OK	OK CAR 2	<p>Verification indicates that emission reductions calculations according to the monitoring report Version1 dated 5 October 2007 were not in line with the monitoring plan dated 19 April 2006 and with the monitoring methodology /15/. Though the approach followed by the project developer for emission reduction calculations was conservative approach but the same was not in line with the approved monitoring plan.</p> <p>The project developer re-calculated the emission reductions based on the monitoring plan dated 29 May 2007 and with the monitoring methodology /15/, and the actual emission reductions resulting from the project activity increased from 15 548 tCO₂ e (in version 01 of monitoring report, dated 05 October 2007) to 15 653 tCO₂e (in version 02 of monitoring report, dated 13 March 2008).</p>	Increasing from 15 548 tCO ₂ e to 15 653 tCO ₂ e.

Risk Areas		Conclusions			Summary of findings and comments	Error/Discounted Uncertainty Tonnes
		Baseline Emissions	Project Emissions	Calculated Emission Reductions		
	<ul style="list-style-type: none"> Data management & reporting 	OK	OK	OK FAR 1 FAR 2 FAR 3	<p>FAR1 The Personnel involved in data management and Reporting can improve the knowledge of the structure of the project in order to increase the control and assure the adequate systematic management of the entire project.</p> <p>FAR2 The Project Participant does not show the analysis of the result of the evaluations and/or competence of the personnel, in order to improve the current training program according to the necessities of the operation of the plant.</p> <p>FAR 3 The project Participant can improve the control over the generated formal procedures of Data Flow and Information Control.</p> <p>In conclusion there is no error or deviation given that the weakness that the project participant shows is a matter of structure and not the essence of the accuracy of the data management and reporting.</p>	NONE
Consistency	<ul style="list-style-type: none"> Changes in the project 	OK	OK	OK	The personnel have been trained to identify and report changes in the Project, given that the employees received training in CDM and data management issues.	NONE

4.1 Summary of periodic verification findings

Finding No.	Description of the finding	Summary of how findings have been addressed by Project Participant	Assessment of how findings have been addressed
CAR 1	No evidence of calibration of meters was available during the site visit.	Deliver Metering Calibration Records.	The project participant delivered the meter calibration records dated 5 November 2007. Given the deviation showed for the main meter (Serial Number AR-0012A368-02), the project participant had taken necessary provisions to use the secondary electricity meter until the main meter is adjusted by the manufacturer. This corrective action request is considered closed.
CAR 2	<p>1. During verification process, DNV observed that the emission reduction calculations are not in line with the approved monitoring plan, dated 19 April 2006. In the monitoring report, version 01 Dated 05 October 2007, the project developer followed the following approach for ER calculations:</p> <ul style="list-style-type: none"> - The electricity generated by the project is supplied to the grid, CFE, from where it is wheeled to the final consumers (depending on their requirements). During verification, DNV observed that whole of the electricity generated by the project is not supplied to the consumers. The difference between electricity generated and electricity supplied to the consumers is stored in the energy bank in the grid. This energy stored is supplied to consumers whenever they need it. Hence, the basis for the emission reduction calculations was the electricity supplied to the consumers 	<p>1. The project participant considering that has the approved generation reports approved by the CFE for the period to be verified, presented to DNV a monitoring report and emission reductions calculations according the monitoring plan dated 19 April 2006 and in lime with the monitoring methodology /15/.</p> <p>2. The project participant delivered to DNV the regulation for the banking system, and the explanation of the functioning of the same.</p>	<p>1. DNV was able to confirm that the net electricity supplied by the project to the grid is measured through the main meter, this meter is owned by CFE and is located at the sub station located 2.5 from the power house. DNV was also able to confirm that the generation reports issued by the CFE (based on readings from the main meter) are fully consistent with the internal generation reports (based on the readings from the internal meters). In the monitoring report, version 2, dated 13 March 2008 (final report version 3 dated 05 August 2008), the project participant calculated the emission reductions based on the readings from the main meter (AR-0012A368-02) which is approved by CFE and for which the project developer provided calibration certificates.</p> <p>2. Furthermore, DNV was also able to confirm the functioning of the energy bank. The bank of energy is managed by CFE (/11/, /12/ and /13/). The function of this bank is to store the balance energy which is dispatched as and when required by the customers.</p> <p>In conclusion, though the initial approach followed by the project developer to calculate the emission reductions (based on the invoices to final customers) was conservative; the same was not in line with the</p>

Finding No.	Description of the finding	Summary of how findings have been addressed by Project Participant	Assessment of how findings have been addressed
	<p>which is sourced from the invoices raised.</p> <p>Though the approach followed by the project developer is conservative, the same is not in line with the approved monitoring plan. The project developer is requested to follow the approved monitoring plan for emission reduction calculations.</p>		<p>approved monitoring plan. Hence, the project participant provided the revised monitoring report wherein the emission reductions resulting from the proposed project are based on the meter reading of the main meter located at 2.5 km from the power house in the sub station and under the control of “CFE” Comisión Federal de Electricidad. The revised monitoring report has been verified and is found to be in line with the approved monitoring plan and monitoring methodology.</p> <p>Hence, CAR 2 is considered closed.</p>
FAR 1	The personnel involved in data management and reporting can improve the knowledge of the structure of the project in order to increase the control and assure the adequate systematic management of the entire project.	The CDM course will include the topic of Systematic Management of the documents and records.	The effectiveness of this course will be reviewed during the next verification.
FAR 2	The project participant does not show the analysis of the result of the evaluations of the competence of the personnel, in order to improve the current training program according to the necessities of the operation of the plant.	The method to analyze the results of the evaluation of the competence of the personnel will be developed.	The method to analyze the results of the evaluations of the personnel and the improved training program, as well as the effectiveness of both will be reviewed during the next verification.
FAR 3	The project Participant can improve the control over the generated formal procedures, Data Flow Charts and Information Control.	The CDM course will include the topic of Systematic Management of the documents and records.	The effectiveness of this course will be reviewed during the next verification.



5 CERTIFICATION STATEMENT

Det Norske Veritas Certification AS (DNV) has been engaged by Impulsora Nacional de Electricidad S de RL de CV (INELEC) to verify the greenhouse gas (GHG) emission reductions reported for the “Trojes Hydropower Project” for the period 01 December 2006 - 30 September 2007, equating to 15 653 tonnes of CO₂ equivalents.

Our opinion relates to the project’s reported GHG emissions reductions for the period 01 December 2006 - 30 September 2007 and relates to the validated and registered project design and its associated documents.

Responsibilities of INELEC and DNV

INELEC; the management of the Trojes Hydropower Project, is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project monitoring plan contained in the registered PDD dated 19 April 2006. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of INELEC.

It is DNV’s responsibility to express an independent GHG verification opinion on the calculation of GHG emission reductions presented from the project for the period 01 December 2006 - 30 September 2007.

Basis of GHG verification opinion

Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakech Accord, as well as those defined by the CDM Executive board.

Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. Our examination includes assessment, of evidence relevant to the amounts and disclosures in relation to the project’s GHG emission reductions reported for the period 01 December 2006 - 30 September 2007.

We planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that the amount of calculated GHG emission reductions for the period 01 December 2006 - 30 September 2007, prepared on the basis of the monitoring plan contained in the registered PDD dated 19 April 2006, are fairly stated. This assessment included:

- *Collection of evidence supporting the reported data*
- *Checking whether the provisions of the monitoring plan contained in the registered PDD dated 19 April 2006 were consistently and appropriately applied*

Opinion

In our opinion, the GHG emission reductions reported for the “Trojes Hydropower Project” for the period 01 December 2006 - 30 September 2007 in the monitoring report version 3 dated 05 August 2008 are fairly stated.

The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology AMS-I.D version 08, the monitoring plan contained in the



registered PDD dated 19 April 2006 and the applied emission factor for the production of electricity in Mexico published by Comisión Federal de Electricidad.

Det Norske Veritas Certification AS is able to certify that the emission reductions from the “Trojes Hydropower Project” for the period 01 December 2006 - 30 September 2007 amount to 15 653 (fifteen thousand six hundred and fifty three) ton CO₂ equivalent.

Oslo, 06 August 2008

Michael Lehmann

Michael Lehmann

Technical Director, Climate Change Services

Det Norske Veritas Certification AS



6 REFERENCES

Documents provided by the project participants that relate directly to the GHG components of the project. These have been used as direct sources of evidence for the verification conclusions, and are usually further checked through interviews with key personnel.

- /1/ INELEC, *Project design document for the “Trojes Hydropower Project”*, Version 3 of 19 April 2006.
- /2/ INELEC, *Second Monitoring Report, Trojes Hydropower Project*, Version 1, 5 October 2007, Version 2, 13 March 2008, Version 3 05 August 2008.
- /3/ Comisión Federal de Electricidad, *Measuring Devices Test Reports*, 31 March 2005, 03 March 2006 and 05 November 2007.
- /4/ Comisión Federal de Electricidad, *Monthly Generation Report*, December 2006 to September 2007.
- /5/ Hidroelectricidad del Pacifico. S. de R.L. de C.V. *Master File Calculation*, October 2007 and March 2008.
- /6/ Hidroelectricidad del Pacifico. S. de R.L. de C.V. *Monthly Electricity Invoices*, December 2006 to September 2007.
- /7/ Det Norske Veritas Certification Ltd. *Validation Report (DNV Report No. 2004-0050)*, 13 September 2006.
- /8/ INELEC, *As Built Draws*, August 2005.
- /9/ INELEC, *CDM Course Evidence Portfolio*, November 2007.
- /10/ INELEC, *Procedures Evidence Portfolio*, November 2007.
- /11/ Comisión Federal de Electricidad and Hidroelectricidad del Pacifico S de RL de CV, *Third Inter Connection Contract*, 23 March 2006.
- /12/ Comisión Federal de Electricidad and Hidroelectricidad del Pacifico S de RL de CV, *Annex G1 of the Third Inter Connection Contract*, 23 March 2006.
- /13/ Comisión Federal de Electricidad and Hidroelectricidad del Pacifico S de RL de CV, *Transmission Agreement*, 30 January 2006.

Background documents related to the design and/or methodologies employed in the design or other reference documents.

- /14/ International Emission Trading Association (IETA), *Validation and Verification Manual*, Version 4, 2004. <http://www.ieta.org>
- /15/ CDM Executive Board, *Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories – AMS-I.D.: Grid connected renewable electricity generation*, Version 08, 2 March 2006.

Persons interviewed during the initial verification, or persons who contributed with other information that are not included in the documents listed above.



- /16/ Salomón Camhaji, Impulsora Nacional de Electricidad S de RL de CV
- /17/ Jacobo Mekler, Impulsora Nacional de Electricidad S de RL de CV
- /18/ José Antonio Mendoza, MYOCEN.
- /19/ Martin Ramirez Vargas, MYOCEN.

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